

### **REMARKS**

Applicants respectfully request reconsideration in view of the following remarks.

Support for newly added claims 21-23 can be found in the original claims. Support for newly added claims 24-26 can be found in the original claims and in the specification at pages 3 and 4 which indicate additional ingredients can be present in the mixture. It is noted that claim 24 uses consisting essentially of language instead of consisting of language. Claim 25 further requires an extra ingredient (an antioxidant).

Claims 1, 7-10, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidenfelder et al., U.S. Patent No. 6,387,355 ("Heidenfelder"). Claims 1, 7-10, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. Haybeck et al., 6,409,995 ("Haybeck"). The applicant respectfully traverses these rejections.

### **Rejection Over Heidenfelder**

Claims 1, 7-10, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidenfelder. The European counterpart of Heidenfelder is cited at page 1, line 14 of the specification. The Examiner acknowledges that Heidenfelder does not disclose an example wherein the claimed components at the claimed percentages are combined in the same composition at the claimed percentages. In addition, the Examiner acknowledges that Heidenfelder does not teach the viscosities cited in claims 8-10.

Heidenfelder discloses sunscreen combinations comprising as essential constituent, amino-substituted hydroxybenzophenones as photostable UV filters in cosmetic and pharmaceutical preparations (see the abstract). The compositions described by Heidenfelder do not comprise 2-ethylhexyl 4-methoxycinnamate as compound B), because the cinnamate is not listed as a compound B) (see Ba-Bh). Therefore, Heidenfelder does not teach UV-B filter of the formula (II) (see Ba-Bh).

2-ethylhexyl 4-methoxycinnamate is only one of 32 compounds listed in the table in columns 14 and 15. The listed compounds can be additionally combined with the UV-filter combination of (A) and (B). As stated by the Examiner at page 4 of the Office Action, the amount of filter (A) is 5 to 50% and the amount of filter (B) is consequently 50-95% by weight based on sunscreen combination of (A) and (B). That means that not more than 45% (100 - 5 (A) - 50 (B)) for an additional UV-filter compound like 2-ethylhexyl 4-methoxycinnamate.

Heidenfelder neither discloses in the description, the claims, nor in the experimental part explicitly the UV-filter of formula I of present claim 1. Heidenfelder discloses amino-substituted hydroxybenzophenones of a formula I wherein only R<sup>3</sup> is exactly defined as n-hexyl (claim 2, claim 9, and examples 2 to 13). The radicals R<sup>1</sup> and R<sup>2</sup>, which are linked to the nitrogen atom, are not preferably defined as ethyl.

A statement that modifications of the prior art to meet the claimed invention would have been "obvious to one of ordinary skill in the art at the time the invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See MPEP § 2143.01 IV. "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Furthermore, the Examiner cannot selectively pick and choose from the disclosed parameters without proper motivation as to a particular selection. The mere fact that a reference may be modified to reflect features of the claimed invention does not make the modification, and

hence the claimed invention, obvious unless the prior art suggested the desirability of such modification. *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430 (Fed. Cir. 1990); *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992). Thus, it is impermissible to simply engage in a hindsight reconstruction of the claimed invention where the reference itself provides no teaching as to why the applicant's combination would have been obvious. *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).

In summary, Heidenfelder does not disclose the amino-substituted hydroxybenzophenone of present claim 1. In addition, Heidenfelder does not mention the appropriate ratios between amino-substituted hydroxybenzophenones and 2-ethylhexyl 4-methoxycinnamate which are claimed in the applicant's claim 1. Furthermore, Heidenfelder does not give any information with respect to the physical properties of the described amino-substituted hydroxybenzophenones. Heidenfelder does not mention the problem how to handle crystalline amino-substituted hydroxybenzophenone derivatives. Heidenfelder does not suggest in any case, that a crystalline solid UV-filter compound can be dissolved in a liquid UV-filter compound at ambient temperature (room temperature) in order to overcome the problem of the present invention - to avoid the crystallization of diethylamino hydroxybenzoyl hexyl benzoate during storage - before the filter is used in the preparation of a cosmetic preparation. For the above reasons, this rejection should be withdrawn.

#### **Rejection Over Haybeck**

Claims 1, 7-10, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haybeck. The European equivalent to Haybeck is cited at page 1, line 10 of the specification. Haybeck at cols. 13 and 14 discloses 32 substances that are UV filters.

Habeck discloses the use of amino-substituted hydroxybenzophenones as photostable UV filters in cosmetic and pharmaceutical preparation (see the abstract). The preparation of N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate (compound 5 of table 2) is reported in the experimental part of Habeck as one example among the preparations of 13 explicitly named compounds (see examples 1-4 and compounds 1-9 at cols. 15-18).

Habeck reports only the  $\lambda_{\text{max}}$ -value and  $E_1^1$ -Value of N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate. Habeck is silent about other physical properties of N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate like melting point, solubility, or crystallization properties. Neither in the description nor in the claims it is reported that N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate is a preferred compound.

The amino-substituted hydroxybenzophenones of Habeck can be combined with any other UV-A or UV-B filter substance, in particular with the listed 32 UV-filter compounds (see cols. 13 and 14). It is noted that 2-ethylhexyl 4-methoxycinnamate (No. 11) is one of these 32 UV-filter compounds.

As acknowledged by the Examiner Habeck does not explicitly disclose the mixture of present claim 1 consisting of N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate (formula I) and 2-ethylhexyl-4-methoxycinnamate (formula II) because the Examiner had to select two special compounds from two lists and had to select the appropriate claimed amounts of each.

The object of the present invention was to provide N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate (Uvinul<sup>®</sup> A Plus) in a form with which undesired crystallizing out of this compound from its melt is prevented (see page 1, lines 32-33 of the applicant's specification).

Habeck does not mention the problem of crystallization of a melt of N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate (formula I) at all. Furthermore, Habeck also does not give any hint how to prevent crystallization of any UV-filter which remains a melt only for some weeks after heating the compound above the melting point, followed by cooling it down to room temperature.

The Examiner stated that Habeck discloses that the amount of UV-A absorber is preferably 20 to 50% by weight, based on the total amount of UV-B and UV-A absorbing substances (see page 7 of the Office Action). The Examiner then concludes that in this case the amount of the UV-B absorber is 80 to 50 % by weight and that these values overlap with the values of present claim 1. But this disclosure must be read in connection with the description of cosmetic preparation starting in column 11, line 42.

The amount of amino-substituted hydroxybenzophenones is at most 10% by weight based on the total amount of the cosmetic preparation (col. 11, line 43). The amount of the second absorber is 40 to 10% by weight based on the total amount of the cosmetic preparation with respect to the amount of UV-B filter based on the total amount of UV filters. This range is calculated as follows:

If UV-A absorber is at most 10%, then the most UV-B would be using the ratio of 20% UV-A to 80% of the absorber UV-B (in other words, UV-B would be 4 times greater than the amount of UV-A). UV-B would be at most 40%. The minimum amount of UV-B would be when it is in the same amount as UV-A (50% of each) and then UV-A and UV-B would be in an amount of 10%. Therefore, the amount of the second absorber is 40 to 10% by weight based on the total amount of the cosmetic preparation with respect to the amount of UV-B filter based on the total amount of UV filters.

Therefore, Habeck discloses cosmetic preparations, which comprise up to 50% by weight of the total preparation of UV-filters (10% by weight of UV-A filter and 40% of UV-B filter). Therefore Habeck does not disclose the liquid mixtures of present claim 1 which "consist of" ("consists essentially of" for claim 24) at least 80% by weight of N-hexyl 2-(4-diethylamino-2-hydroxybenzoyl)benzoate and 2-ethylhexyl-4-methoxycinnamate wherein the ratio is between 30 : 70 and 50:50. Since the claimed ratio is not taught nor disclosed, for this reason alone this rejection should be withdrawn.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 12810-00180-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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